

REMARKS

Claims 1-17 are pending in this application. By this Amendment, claims 1, 6 and 12 are amended. Support for the amendments can be found, for example, in the specification (see page 3, lines 7-10). No new matter is added.

Applicants appreciate the courtesies shown to Applicants' representative by Examiner O'Neill in the November 9, 2009 personal interview. Applicants' separate record of the substance of the interview is incorporated into the following remarks.

In view of the foregoing amendments and following remarks, reconsideration and allowance are respectfully requested.

I. Rejection Under 35 U.S.C. §102

The Office Action rejects claims 1, 4-6, 10-12, 14 and 15 under 35 U.S.C. §102(b) over JP 09-175002 to Osada et al. ("Osada"). Applicants respectfully traverse the rejection.

By this Amendment, claim 1 recites:

A liquid-absorbent composition, comprising:
a powder of a liquid-absorbent crosslinked resin and a binder
resin,

wherein the liquid-absorbent crosslinked resin
comprises a methyl vinyl ether/maleic anhydride copolymer
crosslinked with a polyfunctional isocyanate compound.

claim 6 recites:

A liquid-absorbent sheet, comprising a supporting
substrate and formed on one side thereof a liquid-absorbent
crosslinked resin layer wherein the liquid-absorbent crosslinked
resin layer comprises a methyl vinyl ether/maleic anhydride
copolymer crosslinked with a polyfunctional isocyanate
compound.

and claim 12 recites:

A method for manufacturing a liquid-absorbent
crosslinked resin, comprising dissolving a solution consisting
of a methyl vinyl ether/maleic anhydride copolymer in an
amount of 3 to 35 wt% in a solvent with an SP value of 9 to 14,

and adding a polyfunctional isocyanate compound to this solution to perform a crosslinking reaction.

Osada fails to disclose each and every feature of claims 1, 6 and 12.

Instead, Osada merely discloses a resin composition obtained by dissolving a crosslinked polyalkylene oxide resin with a hydrophilic resin in an organic solvent, as acknowledged by the September 22, 2009 Advisory Action (see Osada, paragraph [0017] and Advisory Action, page 2). Although Osada discloses vinyl methyl ether and maleic-anhydride copolymer resin as a hydrophilic resin, only the polyalkylene oxide resin is crosslinked with an isocyanate compound (see Osada, paragraph [0009]).

As discussed during the personal interview, crosslinks are bonds, ionic or covalent, that attach or 'link' polymer chains to each other. Typically, individual chains of crosslinked polymers are connected through a rigid framework. Crosslinking can also increase a compound's strength (Lewis, Richard, *Hawley's Condensed Chemical Dictionary* 346 (5th ed. 2007)). In particular, a methyl vinyl ether/maleic acid anhydride copolymer, when crosslinked with a polyfunctional isocyanate, forms a liquid-absorbent crosslinked resin gel by crosslinking their chains together as recited in claims 1, 6 and 12 (*see* specification, page 3, lines 7-15 and Example 1). The crosslinked resin recited in claims 1, 6 and 12 is capable of absorbing and holding large quantities of carbonate-based solvents commonly used in nonaqueous electrolyte battery cells (*see* specification, page 6, lines 1-8 and page 8, lines 5-12). Further, the degree of swelling of various liquid-absorbent crosslinked resins recited in Examples 1-6 of the specification can be found in Table 1 (specification, page 16).

It is well settled that a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *See* MPEP §2131. Based on the above, Osada does not disclose: (1) a liquid-absorbent composition comprising a powder of a liquid-absorbent crosslinked resin wherein the liquid-

absorbent crosslinked resin comprises a methyl vinyl ether/maleic anhydride copolymer crosslinked with a polyfunctional isocyanate compound, as recited in claim 1; (2) a liquid-absorbent sheet comprising, *inter alia*, a liquid-absorbent crosslinked resin that comprises a methyl vinyl ether/maleic anhydride copolymer crosslinked with a polyfunctional isocyanate compound, as recited in claim 6; or (3) a method for manufacturing a liquid-absorbent crosslinked resin, comprising dissolving a solution consisting of a methyl vinyl ether/maleic anhydride copolymer in an amount of 3 to 35 wt% in a solvent with an SP value of 9 to 14, as recited in claim 12.

Osada fails to disclose, either expressly or inherently, each and every feature of claims 1, 6 and 12 and, thus, does not anticipate claims 1, 6 and 12. Claims 4, 5, 10, 11, 14 and 15 variously depend from claims 1, 6 and 12 and, thus, are also not anticipated by Osada.

Accordingly, for at least the reasons set forth above, reconsideration and withdrawal of the rejection are respectfully requested.

II. Rejections Under 35 U.S.C. §103

A. Osada in view of Koike

The Office Action rejects claims 2, 3, 9 and 13 under 35 U.S.C. §103(a) over Osada, as applied above, and further in view of U.S. Patent No. 6,306,414 to Koike ("Koike"). Applicants respectfully traverse the rejection. The above discussion with respect to Osada in relation to the rejection under §102 is incorporated herein by reference.

Claims 2 and 3 variously depend from claim 1; claim 9 depends from claim 6; and claim 13 depends from claim 12 and, therefore, claims 2, 3, 9 and 13 contain all of the features of the claims from which they depend. Thus, the deficiencies of Osada with respect to claims 1, 6 and 12 are applicable to claims 2, 3, 9 and 13.

Koike is merely applied by the Office Action as allegedly addressing additional features recited in dependent claims 2, 3, 9 and 13 and, thus, Koike is not applied to cure the deficiencies of Osada with respect to claims 1, 6 and 12.

Instead, Koike is directed to an aqueous suspension of an agrochemical comprising a compound of formula (I), or a salt thereof, the compound representing an agricultural pesticide, a condensate of formaldehyde with aromatic sulfonic acid, or a salt thereof, or a polyoxyalkylene allyl phenyl ether sulfate, and an absorptive water-soluble polymer (Koike, col. 1, lines 39-67). However, Osada and Koike, as applied in the Office Action, fail to disclose: (1) a liquid-absorbent composition comprising a powder of a liquid-absorbent crosslinked resin wherein the liquid-absorbent crosslinked resin comprises a methyl vinyl ether/maleic anhydride copolymer crosslinked with a polyfunctional isocyanate compound, as recited in claim 1; (2) a liquid-absorbent sheet comprising, *inter alia*, a liquid-absorbent crosslinked resin that comprises a methyl vinyl ether/maleic anhydride copolymer crosslinked with a polyfunctional isocyanate compound, as recited in claim 6; or (3) a method for manufacturing a liquid-absorbent crosslinked resin, comprising dissolving a solution consisting of a methyl vinyl ether/maleic anhydride copolymer in an amount of 3 to 35 wt% in a solvent with an SP value of 9 to 14, as recited in claim 12. Further, the applied references and the Office Action fail to provide any reason or rationale for one of ordinary skill in the art to have modified either Osada or Koike to have included each and every feature of claims 1, 6 and 12.

In view of the foregoing, Applicants respectfully submit that Osada and Koike, alone or in combination, fail to disclose, and would not have rendered obvious, each and every feature of claims 1, 6 and 12. Claims 2, 3, 9 and 13 variously depend from claims 1, 6 and 12 and, thus, also would not have been rendered obvious for at least the reasons set forth above.

Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

B. Osada in view of Sato

The Office Action rejects claims 7, 8, 16 and 17 under 35 U.S.C. §103(a) over Osada, as applied above, and further in view of JP 2001-351588 to Sato et al. ("Sato"). Applicants respectfully traverse the rejection.

Claims 7, 8, 16 and 17 variously depend from claims 1 and 6 and, therefore, contain all of the features of claims 1 and 6. Thus, the deficiencies of Osada with respect to claims 1 and 6, as discussed above, are applicable to claims 7, 8, 16 and 17. Sato is merely applied by the Office Action as allegedly addressing additional features recited in dependent claims 7, 8, 16 and 17 and, thus, does not cure the deficiencies of Osada with respect to claims 1 and 6.

More specifically, Sato discloses various features of a cell pack in which a rechargeable battery cell is held, the cell pack having a liquid absorbing material provided inside the battery case (Sato, paragraphs [0001] and [0005]). However, Osada and Sato, as applied in the Office Action, fail to disclose: (1) a liquid-absorbent composition comprising a powder of a liquid-absorbent crosslinked resin wherein the liquid-absorbent crosslinked resin comprises a methyl vinyl ether/maleic anhydride copolymer crosslinked with a polyfunctional isocyanate compound, as recited in claim 1; or (2) a liquid-absorbent sheet comprising, *inter alia*, a liquid-absorbent crosslinked resin that comprises a methyl vinyl ether/maleic anhydride copolymer crosslinked with a polyfunctional isocyanate compound, as recited in claim 6. Further, the applied references and the Office Action fail to provide any reason or rationale for one of ordinary skill in the art to have modified either Osaka or Sato to have included each and every feature of claims 1, 6 and 12.

Accordingly, the applied references, alone or in combination, would not have rendered claims 1 and 6 obvious. Claims 7, 8, 16 and 17 variously depend from claims 1 and 6 and,

thus, also would not have been rendered obvious by the applied references, for at least the reasons set forth above.

Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

III. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of the claims are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Attachment:
Request for Continued Examination

Date: November 12, 2009

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